



## A study on agriculture problems faced by farmers and its solutions

L Ramesh<sup>1</sup>  
Dr. L Prakash<sup>2</sup>

### Abstract

Agriculture, which is the backbone of the Indian economy, contributes to the country's overall economic development and determines the standard of living for more than half of the population. Agriculture accounts for just about 14% of total GDP, but it has a significant effect on the manufacturing and service sectors, as the rural population has become a significant user of goods and services in recent decades.

Key Words: *Agriculture, Farmers*

### 1. INTRODUCTION

India's experience confirms its agricultural productivity, favorable climatic conditions, and abundant natural resources. India (which cultivates wheat, rice, and cotton on large swaths of its land) is also a major exporter of spices, pulses, and milk on the international market. Agriculture contributed 75% of India's GDP a few decades ago, but it now only contributes 14%. According to the CIA's World Factbook 2014, India was the second-largest producer (\$ 367 billion) after China (\$ 1,005 billion) among four other countries that accounted for 42 percent of global agricultural production – \$ 4,771 billion.

In a nutshell, India is a global farming superpower, with farmers and other agricultural workers serving as its backbone. The agricultural landscape, like many other markets, is threatened by long-standing concerns and unexpected problems that must be resolved. Let's speak about some of the most pressing problems that farmers in India face, as well as the best possible solutions.

### 2. PROBLEMS FACED BY THE AGRICULTURE SECTOR

#### 2.1 Fragmented land holding:

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<sup>1</sup>Assistant Professor, Department of Computer Science, TIPS College of Arts and Science

<sup>2</sup> Assistant Professor, Department of Commerce, TIPS College of Arts and Science



Almost 80% of the 140 million farming families own less than two acres of land. Farmers with large land holdings may use modern agricultural techniques to improve productivity. Small land holdings limit the farmer's ability to use conventional farming methods and reduce productivity. Since land holdings are small, more people are forced to work on farms in rural areas, and farm incomes suffer as a result of outdated technology.

## **2.2 Irrigation problems:**

The majority of farming in India is monsoon-dependent; when the monsoons are healthy, the entire economy (not just the agricultural sector) thrives; when the monsoon fails, everyone suffers. The issue here is either a lack of or improper control of water. If the country is to increase agricultural production and boost the overall economy, irrigation, which absorbs more than 80% of total water usage in the country, needs to be overhauled.

## **2.3 Seed problems:**

Most of the farmers – especially the poor and marginal ones – are dependent on seeds sold in the market. Moreover, the HYV seeds as well as the GM seeds which promise higher yields force the farmers to buy seeds for every crop. With spurious seeds hitting the market, the farmers' woes have exceeded all limits. Sometimes seeds do not give the stated/claimed yields and farmers run into economic troubles.

In many cases of GM and HYV seeds, farmers are forced to use high amounts of fertilisers and pesticides, provide large amounts of water (irrigation) and abide to all the other farming requirements that the companies mandate to get the proper yields.

Companies use legal loopholes to transfer responsibility for failed crops onto farmers. Proper regulation/legislation to keep seed companies responsible for false claims is urgently needed.

## **2.4 Sustainability problems**

Due to the use of obsolete farming technology, India's agricultural productivity is very low as compared to world standards. In addition, the poor farming community's lack of awareness of the need for survival has exacerbated the situation.

Some arid areas abuse the irrigation facilities provided by planting water-intensive crops, resulting in unplanned water use. Ground water supplies are extensively used in areas where irrigation in the form of rivers and canals is insufficient.



Agriculture's sustainability is critical because many of the challenges that farmers face is linked to it. Excess fertilizer use not only makes plants reliant on chemical fertilizers, but it also erodes soil quality, pollutes ground water, and pollutes local water sources throughout the case of surface runoff.

Planting crops that need more water, such as rice, on the basis of irrigation facilities extended to water-scarce areas consumes more water than is needed. Furthermore, excessive evaporation causes salts to collect on the fields, reducing their fertility.

Farmers would be pushed into a vicious spiral of debts, heavy fertilizer usage, water mismanagement, poor productivity, and therefore more debts for the next cycle due to a lack of awareness of the need to grow crops sustainably.

## **2.5 Over dependence on traditional crops like rice and wheat**

To produce the best yields, each crop needs specific climatic conditions. Despite the fact that rice and wheat are grown in large areas of India, some regions can easily turn to other crops to increase productivity. India imports cooking oil from other countries, despite the fact that we have the requisite conditions to develop more oilseeds locally.

The lack of a proper national agriculture plan is evidenced by the heavy reliance on conventional rice and wheat. Excess stocks in a few crops trigger issues with selling, storage, and a lack of other critical farm production.

Furthermore, if farm production is skewed against crops like rice, farmers may abuse irrigation and ground water facilities, resulting in a slew of other issues.

## **2.6 Supply channel bottlenecks and lack of market understanding**

Bottlenecks in the supply chain and a lack of a proper marketing channel are serious issues for a farmer who is already dealing with a slew of issues. These are problems that must be addressed on a federal, state, and national scale.

Farmers are forced to distress sales due to a lack of a proper marketing channel, making them victims of greedy middlemen and limiting their profits.

In years when productivity is high, an inadequate marketing and storage channel contributes to storage issues, low agricultural exports due to quality issues, and, in many cases, gross wastage of valuable food grains and other farm output.



Food wastage that amounts to thousands of crores of rupees every year is nothing short of a crime in a country where more than 25% of the population lives in poverty and millions go hungry every day.

Due to a lack of a national agricultural production policy, some crops are produced in excess of requirements, while others are produced well below minimum requirements. The problem is compounded in the case of perishable agricultural products such as vegetables and fruits, where waste is estimated to be around 40%.

India produces over 265 million tonnes of food grains each year, more than enough to feed its entire population for many years. Despite this, we see a lot of wasted food, rising food prices, and millions of hungry people. This has to be stopped.

## **2.7 Government handling of the issue**

India lacks the necessary storage facilities (granaries, warehouses, cold storage, and so on), negating the benefit of a bumper crop during good monsoon years.

Exports in the agricultural sector are also not promising, accounting for just 10% of total exports in a country where agriculture employs more than 50% of the population.

The government's Minimum Support Prices (MSPs) are a two-edged sword: they shield farmers from middlemen, but they also expose the government to an excessive fiscal deficit by purchasing excess produce during periods of excess crop.

## **3. SOLUTIONS**

1.The burden of scattered land holdings would be alleviated by village land consolidation and cooperative farming. The aggregate land can be farmed using the latest technologies when farmers join a consortium at the village level.

2. Banks will also be willing to lend money to a village consortium that can be used to increase farm production, implement sustainable farming practices, minimize fertilizer overuse, and solve a variety of problems.

3.In this situation, the overall probability of crop failure is smaller, and small farmers have a greater chance of making a fair profit at the end of the harvest season. When a village-level plan is adopted, agricultural intensity increases as well.



4. Agricultural credit and farm mechanization for small and marginal farmers will continue to be difficult unless pooling of farm resources and/or a joint usage of farm technology are employed.
5. Government should help with irrigation concerns, ideally at the state and national levels. Though the government cannot compel farmers to grow only certain crops in specific areas, it can certainly inform them about other options.
6. It will be a win-win situation for both the farmers and the country if proper techniques (in water management at the provincial, state, and national levels, as well as a crop plan of what to produce and where to produce) are used.
7. Irrigation concerns, as well as issues related to single/traditional crop dependency, can be resolved by a national agricultural production plan. In areas where food crops are not advantageous, the government should encourage farmers to switch to cash crops (oil seeds, etc.) instead of food crops to minimize imports and raise exports.
8. Seed problems can be solved by establishing in-house seed banks for conventional crops at the village level (reducing farmer reliance on foreign seed banks), selling government-approved seeds through proper channels (to exclude bogus seeds), and imposing stringent sanctions on seed marketing firms if the seeds do not meet the companies' claims (germination and yield).
9. Scientific studies in this area should be promoted in order to support seeds that are low in resource requirements but also assisting farmers in increasing yields.
10. Proper crop management focused on water supply, crop substitution, new agriculture methods to improve production, converting to sustainable farming (village ponds would cut costs), and an emphasis on allied activities are some of the biodiversity options.
11. Small innovations at the grass-roots level can sometimes solve a slew of problems unique to a given region. District agricultural officers should make it a habit to encourage such ideas and to participate in knowledge sharing so that the ideas can be implemented at the regional level.
12. First and foremost, proper knowledge – among both farmers and consumers – is needed for organic farming. Organic farming reduces the use of artificial fertilizers, water consumption, strikes a good balance between the local environment and farm output, helps the land retain its fertility for a long time, lowers long-term costs, and establishes a virtuous cycle between consumers and farmers with the creation of a proper market in towns and cities.



13. Small cold storage or granaries at the village level, which can be built with Panchayat funds and loans to the village society, can improve storage facilities (this eliminates dumping of excess crops in the market yard).

14. A 700 tonne cold storage cum warehouse would cost about Rs. 1.5 crores, which is a very affordable price for a community of villagers or a big Panchayat, assuming the State or Union Government covers the cost. E-Mandis can also assist farmers in accurately forecasting markets and thereby profitably marketing their products.

15. An agricultural strategy or policy at the state level to boost knowledge sharing, national level cold storage chains, and logistic network (if Walmart can do it, so can the Government of India!) is desperately needed.

16. PDS must be well managed in order to reduce waste and make an accurate estimation of food grain requirements. After holding reserves for a possible drought year, the surplus can be exported as long as the quality is preserved by proper storage.

17. Food waste will thereby be minimized, and the agricultural trade balance can be strengthened, if a national strategy is in effect.

## CONCLUSION

This article explains various methods that can be used to solve the challenges that the agriculture industry is facing. The drought season is the most serious issue that this industry faces. Drought-affected areas have been irrigated, which has fixed the issue. Another issue affecting the agriculture sector is labour intensiveness. Mechanization of the farms has solved this problem. This has aided in the reduction of labour, which has been a major issue for farmers. Another concern is the irrigation systems. Traditional agricultural practices are also used by some people. This has been addressed by delivering extension programmes, which have assisted in the preparation of those growers.



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